

Dennis R. Madison  
Vice President  
Vogtle -Units 1 & 2

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September 23, 2014

Docket No: 50-424

NL-14-1442

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555-0001

**Vogtle Electric Generating Plant – Unit 1  
Licensee Event Report 1-2014-004-00  
Manual Reactor Trip due to Loss of Feedwater Flow**

Ladies and Gentlemen:

In accordance with the requirements of 10 CFR 50.73(a)(2)(iv)(A), Southern Nuclear Operating Company (SNC) is submitting the enclosed Licensee Event Report, 1-2014-004-00. This letter contains no NRC commitments. If you have any questions, please contact Kevin Walden at (706) 848-4290.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Dennis R. Madison".

Dennis R. Madison  
Site Vice President - Vogtle

DRM/KCW

Enclosure: Unit 1 Licensee Event Report 1-2014-004-00

cc: Southern Nuclear Operating Company

Mr. S. E. Kuczynski, Chairman, President & CEO  
Mr. D. G. Bost, Executive Vice President & Chief Nuclear Officer  
Mr. T. E. Tynan, Vice President – Fleet Operations  
Mr. B. L. Ivey, Vice President – Regulatory Affairs  
Mr. D. R. Madison, Vice President – Vogtle 1 & 2  
Mr. B. J. Adams, Vice President – Engineering  
RType: CVC7000

U. S. Nuclear Regulatory Commission

Mr. V. M. McCree, Regional Administrator  
Mr. R. E. Martin, NRR Senior Project Manager – Vogtle 1 & 2  
Mr. L. M. Cain, Senior Resident Inspector – Vogtle 1 & 2

**Vogtle Electric Generating Plant – Unit 1  
Licensee Event Report 1-2014-004-00  
Manual Reactor Trip due to Loss of Feedwater Flow**

**Enclosure**

**Unit 1 Licensee Event Report 1-2014-004-00**

**LICENSEE EVENT REPORT (LER)**(See Page 2 for required number of  
digits/characters for each block)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to [Infocollect.Resource@nrc.gov](mailto:Infocollect.Resource@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

**1. FACILITY NAME****Vogtle Electric Generating Plant****2. DOCKET NUMBER**

05000424

**3. PAGE**

1 OF 3

**4. TITLE**

Manual Reactor Trip due to Loss of Feedwater flow

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
7	27	2014	2014	004	00	09	25	2014	N/A	N/A

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)			
1	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
10. POWER LEVEL  100	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 368A

**12. LICENSEE CONTACT FOR THIS LER****LICENSEE CONTACT**

Vogtle Electric Generating Plant, Kevin Walden, Licensing Engineer

**TELEPHONE NUMBER (Include Area Code)**

706-848-4290

**13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT**

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
B	SJ	PSV	B070	Y					

**14. SUPPLEMENTAL REPORT EXPECTED**☐ YES (If yes, complete 15. EXPECTED SUBMISSION DATE) ☒ NO**15. EXPECTED SUBMISSION DATE**

MONTH DAY YEAR

**ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)**

On July 27, 2014 at approximately 1409 Eastern Daylight Time, Vogtle Unit 1 was operating in Mode 1 at 100 percent power. While surveillance testing was being performed on the Main Feed Pump A (MFP A) a control oil leak developed in the lockout solenoid valve. The reduced control oil pressure resulted in a reduction of feed pump speed. Control Room Operators observed lowering feedwater flow to the Steam Generators and manually actuated the Reactor Protection System (RPS) system which resulted in a turbine-generator trip. All rods fully inserted into the core, the Main Feedwater Isolation system and the Auxiliary Feedwater system automatically actuated as expected. The unit was stabilized in Mode 3 and decay heat was discharged to the condenser. The cause of the event was a failure of the trip lockout solenoid valve which led to reduced pressure on the trip relay for MFP-A which reduced the speed of the pump and consequently the total feed flow to the Steam Generators.

The safety significance of the event is very low. Unit 2 was not affected and there were no adverse effects on the health and safety of the public.

**LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET**

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to [Infocollects.Resource@nrc.gov](mailto:Infocollects.Resource@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REV NO.	
Vogtle Electric Generating Plant	05000424	2014	- 004	- 00	2 OF 3

**NARRATIVE****A. REQUIREMENT FOR REPORT**

This report is required per 10CFR 50.73(a)(2)(iv)(A) due to an unplanned manual actuation of the Reactor Protection System (RPS) and automatic actuation of the Auxiliary Feedwater System (AFW).

**B. UNIT STATUS AT TIME OF EVENT**

Mode 1, 100 percent power

**C. DESCRIPTION OF EVENT**

While operating at 100 percent power, the Unit 1 Main Feed Pump A speed began to lower resulting in a loss of sufficient feedwater flow to maintain Steam Generator levels. The Operators in the Control Room observed the lowering feedwater flow and manually actuated the RPS, tripping the reactor prior to reaching any automatic RPS actuation setpoints. All rods fully inserted and the plant was stabilized in Mode 3. Decay heat was discharged to the condenser and no complications were experienced during the trip as all systems responded as designed.

The cause of the event was a loss in MFP A speed due to control oil leakage on the lockout solenoid valve.

**D. CAUSE OF EVENT**

The direct cause of the event was internal control oil leakage of the lockout solenoid valve which resulted in less than adequate control oil pressure. As a result, total feedwater flow to the Steam Generators lowered due to decreasing MFP A speed.

**E. SAFETY ASSESSMENT**

When the reactor tripped, all rods fully inserted and all safety systems actuated as designed. The unit was stabilized in Mode 3 at normal temperature and pressure and decay heat was discharged to the condenser. Because the plant responded as designed and there were no complications with plant shutdown, there was no adverse effect on plant safety or the health and safety of the public.

**F. CORRECTIVE ACTION**

The solenoid valve was replaced and post maintenance testing was performed satisfactorily.

**LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET**

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**NARRATIVE**

**G. ADDITIONAL INFORMATION**

**1. Failed Components:**

Main Feed Pump A lockout solenoid valve.

**2. Previous Similar Events:**

INPO OE 21051 Recurring Solenoid and Relay Failures in Main Feedwater Pump Turbine Overspeed Test Circuit.

**3. Energy Industry Identification System Code:**

[JC] – Reactor Protection System

[BA] – Auxiliary Feedwater

[JB] – Feedwater/Steam Generator Water Level Control System